CLIMATE ADAPTATION OPTIONS EVALUATIONS

Water

IMPACT TO SAN DIEGO REGION		VULNERABILITY			ADAPTATION OPTIONS	CRITERIA			NOTES
		Pressure on Local Systems & Services	Risk*			City Jurisdiction?	Fiscally Feasible?	Complement Current Measures?	
Diminished imported water supplies	A	Lower imported water supplies available for residential, municipal, and commercial users, and exposure to extended and more intense droughts	HIGH Likelihood: 4 Consequence: 5 TOTAL: 20	12	Integrate water conservation concerns into the municipal project procurement process	YES	YES	YES	_____
	B	Increased pressure to meet local water demand through local supplies	MEDIUM Likelihood: 4 Consequence: 3 TOTAL: 12	17	Investigate broader use of reclaimed/recycled water	YES	YES	YES	Although City is not a water provider, it is working with districts to develop a potential reclaimed water plant
				18	Facilitate & educate residents and businesses about appropriate uses and benefits of graywater systems and new standards	YES	YES	YES	Limited outreach currently concerning graywater
	C	Difficulty meeting increase in water demand for new development & expected growth	HIGH Likelihood: 4 Consequence: 4 TOTAL: 16	21	Require new buildings/developments to plan for graywater systems	YES	YES	YES	If recycled water is available, new developments already need to include it.
				23	Require large new developments to provide "water offsets" for additional water demand	YES	YES	YES	Could be part of CEQA mitigation process
Drier local conditions	E	Lower local ground water supplies available for Chula Vista	LOW Likelihood: 3 Consequence: 1 TOTAL: 3	27	Establish a limit on area of impervious surface allowable in new development to improve groundwater recharge (mainly benefit private wells)	YES	YES	YES	_____
				28	Adopt an ordinance to identify and protect the integrity and sustainability of aquifer/groundwater recharge areas (mainly benefit private wells)	YES	YES	YES	May require funding to identify recharge areas
	G	Lower rainfall amounts causes higher concentrations of pollutants in urban runoff	LOW Likelihood: 3 Consequence: 1 TOTAL: 3	30	Revisit City's Stormwater regulations and Best Management Practices (BMP) requirements to manage higher concentrations of pollutants in runoff	YES	YES	YES	New regulations and BMPs could be incorprated into new project (public & private) review and approval process
Wetter wet years	H	Raised threat to physical infrastructure from floods	MEDIUM Likelihood: 2 Consequence: 4 TOTAL: 8	31	Monitor and seek out more actionable science on possible increase in flood risk due to changes in rainfall intensity, duration, and frequency due to climate change	YES	YES	YES	_____
				32	Work through the County's Multi-Jurisdiction Hazard Mitigation Plan process to update flood (and other hazard) risk as it increases with climate change impacts	YES	YES	YES	_____
				33	Incorporate increased flood risk into General Plan Safety Element	YES	YES	YES	Could be incorporated into future GP updates, as needed
				34	Avoid siting new development in areas with less than a 200-year level of flood protection	YES	YES	YES	Could be incorporated into future GP/zoming update
				38	Improve methods to use and enhance natural landscape and drainage features for runoff control	YES	YES	YES	Could be incorporated into both private & public projects
				39	Improve information to property owners outside 100-yr floodplain about inundation risk, so they can decide to purchase flood insurance even if not required	YES	YES	YES	_____

***RISK = Likelihood of an Impact X Consequence of the Impact; each factor scored from 1 to 5 and overall risk was categorized as "Low" (1-7 total score), "Medium" (8-15 total score), and "High" (16-25 total score).**

Chula Vista Climate Change Impacts & Adaptation Options

ENERGY

IMPACT TO SAN DIEGO REGION		VULNERABILITY			ADAPTATION OPTIONS	CRITERIA			NOTES
		Pressure on Local Systems & Services	Risk*			City Jurisdiction?	Fiscally Feasible?	Complement Current Measures?	
Average annual temperatures 1.5-4.5° F hotter, additional summertime warming	**A**	Higher peak demand and transmission inefficiencies in summertime (when cooling needs are greatest) make stable and adequate supplies increasingly challenging	HIGH Likelihood: 5 Consequence: 5 TOTAL: 25	7	Enroll all municipal facilities in demand response programs (if applicable)	YES	YES	YES	_____
				8	Update emergency plans to account for potentially more blackouts and identify emergency centers as priorities for onsite renewable energy sources	YES	YES	YES	_____
	C	Higher cooling demand in urban areas due to higher temperatures ("Urban Heat Island Effect")	HIGH Likelihood: 5 Consequence: 4 TOTAL: 20	13	Require or provide incentives for new residential development with air-conditioning systems to install ENERGY STAR cool roof technology	YES	YES	YES	_____
				16	Incorporate cool paving technologies into maintenance of existing municipal streets and properties	YES	YES	YES	_____
				17	Ordinance to require new parking lots to incorporate shade trees and permeable, reflective pavements	YES	YES	YES	_____
				18	Develop incentives or financing mechanisms to expand urban forests on public & private properties	YES	YES	YES	_____
				19	Give preference to canopy forming trees into all municipal street & landscape projects	YES	YES	YES	_____
Lower hydropower available to the region (current 5% of SDG&E mix)	**D**	Increasing pressure to diversify local supplies and renewable sources of energy	LOW Likelihood: 4.5 Consequence: 1 TOTAL: 4.5	23	Through City planning process, seek options for district heating and cooling systems in new development projects	YES	YES	YES	Studies were completed on the bayfront in the past
				26	Participate as a local government in EPA's Green Power Partnership Program, and promote program to local organizations	YES	YES	YES	_____

***RISK = Likelihood of an Impact X Consequence of the Impact; each factor scored from 1 to 5 and overall risk was categorized as "Low" (1-7 total score), "Medium" (8-15 total score), and "High" (16-25 total score).**

Chula Vista Climate Change Impacts & Adaptation Options

PUBLIC HEALTH & WILDFIRES

IMPACT TO SAN DIEGO REGION		VULNERABILITY			ADAPTATION OPTIONS	CRITERIA			NOTES
		Pressure on Local Systems & Services	Risk*			City Jurisdiction?	Fiscally Feasible?	Complement Current Measures?	
More frequent, intense and longer heat waves (about 3x more frequent by 2050)	A	General increase in heat stroke, heat exaustion, death, and exacerbation of existing diseases amongst residents during heat waves	HIGH Likelihood: 4 Consequence: 5 TOTAL: 20	1	Work with the County to ensure that all Chula Vista city departments and community groups possibly involved in implementing the County's Excessive Heat Response Plan are aware and equipped to perform their role	YES	YES	YES	_____
				2	Expand existing "cooling centers" available in Chula Vista during heat events to ensure adequate space is available at all times of the week (including nights), with back-up generators	YES	YES	YES	Current Cool Zones include South Library & Norman Park (plus two non-City sites)
				4	Partner with local CERT participants during declared heat emergency events to support cooling center operations and outreach	YES	YES	YES	_____
				5	Consider including "extreme heat" events as a significant emergency in Chula Vista's portion of the County's Multi-Jurisdiction Hazard Mitigation Plan, and redefining "extreme heat" events	YES	YES	YES	_____
	B	Increased pressure on health of especially vulnerable groups: elderly, young children, outdoor workforce, socially-isolated people with pre-existing illnesses, homeless, those without access to air conditioning	HIGH Likelihood: 4 Consequence: 5 TOTAL: 20	6	Identify vulnerable residents in Chula Vista, and community groups working with vulnerable populations (e.g. hospitals, schools, Meals on Wheels) and ensure heat emergency outreach & education programs work with them	YES	YES	YES	_____
				7	Work with County to ensure "vulnerable populations" are a focus in County's Excessive Heat Response Plan and reverse 911 calls include current assessment of vulnerable population in Chula Vista	YES	YES	YES	_____
				9	Incorporate a public health element into the next General Plan update in order to improve overall health, physical activity, and resilience of residents through community design	YES	YES	YES	_____
				10	Outreach to businesses about California Occupational Safety and Health programs and standards for heat illness and employees working outdoors, in partnership with any relevant business, labor or community groups	YES	YES	YES	_____
More frequent & intense wildfires, and other possible natural disasters	F	Significant increase in occurance and severity of respiratory illnesses and difficulty meeting air quality standards during wildfires	MEDIUM Likelihood: 2 Consequence: 4 TOTAL: 8	17	Work in partnership with local fire agency and County to increase public awareness about health dangers of wildfires, monitoring harmful exposures, and focused outreach to populations with existing respiratory or cardiovascular illness	YES	YES	YES	_____
	G	Higher risk of losing public and private infrastructure from more frequent and intense fires	MEDIUM Likelihood: 2 Consequence: 5 TOTAL: 10	18	Develop comprehensive building codes to ensure resilience of private and municipal structures when wildfires occur, especially those near the wildland urban interface	YES	YES	YES	_____
				19	Establish a limit or minimize expansion of the wildland-urban interface in planning documents	YES	YES	YES	_____
				20	Direct city staff to investigate whether the city's building codes, wildlife urban interface code, and zoning rules need revision due to future increases in wildfires due to climate change	YES	YES	YES	_____
				21	Update the Chula Vista-focused portion of the County's Multi-Jurisdiction Hazard Mitigation Plan (which bases risk of hazards on historical trends) to include impact of climate change on hazards such as wildfires, which will occur more often than assumed in the past	YES	YES	YES	_____
				22	Add an education/audit component for homeowners in fire-prone areas participating in the Home Upgrade, Carbon Downgrade or California First program, by including information on possible home improvements to improve resiliency to wildfires	YES	YES	YES	_____
				23	Ensure adequate shelters are in place as part of wildfire emergency response plans to provide displaced persons a healthy and safe temporary shelter	YES	YES	YES	_____

***RISK = Likelihood of an Impact X Consequence of the Impact; each factor scored from 1 to 5 and overall risk was categorized as "Low" (1-7 total score), "Medium" (8-15 total score), and "High" (16-25 total score).**

Chula Vista Climate Change Impacts & Adaptation Options

ECOSYSTEMS & BIODIVERSITY

IMPACT TO SAN DIEGO REGION		VULNERABILITY			ADAPTATION OPTIONS	CRITERIA			NOTES
		Pressure on Local Systems & Services	Risk*			City Jurisdiction?	Fiscally Feasible?	Complement Current Measures?	
"Climatic envelopes" where specific species can survive will shift	**A**	Plants and animals can't move rapidly enough to survive, or can't move upland to cooler areas due to urban areas	HIGH Likelihood: 4 Consequence: 4 TOTAL: 16	1	Review local habitat management plans (Chula Vista MSCP Subarea Plan) to ensure adequate connectivity, open space, and diversity of topographic and climatic conditions are provided for species to move as climate shifts. Where possible, work with adjacent public land managers.	YES	YES	YES	_____
				2	Seek opportunities to partner with the Wildlife Agencies and/or adjacent public land managers to monitor local habitats and species dispersion, in order to assess impacts associated with climate change on the City's biodiversity and ecosystems	YES	YES	YES	_____
				3	As funding becomes available, implement active habitat restoration and enhancement in MSCP areas to reduce impact of climate change stressors and improve overall resiliency of local habitats	YES	YES	YES	_____
				4	Seek funding opportunities for potential land acquisitions and/or development of management programs, such as the creation of a "carbon credit purchasing program" in order to preserve additional open space that may be contiguous with the City's Preserve	YES	YES	YES	_____
				5	Assess need for securing strategic open lands to provide transition zones to accommodate retreat or spatial shifts in natural areas such as coastal wetlands and freshwater marshes	YES	YES	YES	_____
				6	Educate the public about the impacts of climate change and what the community is doing to address impacts to canyons, parks, coastal ecosystems in community newsletters, websites, public events, and trailheads	YES	YES	YES	_____
				8	Ensure integrity of MSCP plan is upheld in new regional plans and plan updates	YES	YES	YES	_____
Sea level rise along coast and Bay	**D**	Coastal habitats (wetlands) and intertidal species inundated if they aren't able to gradually move upland	HIGH Likelihood: 5 Consequence: 4 TOTAL: 20	14	Incorporate information on sea level rise into coastal planning and ecosystem management and restoration plans	YES	YES	YES	_____
				15	Where it is feasible, consider the potential to allow coastal wetlands to migrate inland (e.g. identifying appropriate setbacks, density restrictions, land purchases) over a timeframe relevant to expected sea level rise	YES	YES	YES	_____
				20	In accordance with the City's MSCP Subarea Plan, incorporate wetland protection, to the maximum extent practicable, into city infrastructure planning (e.g. general plan, transportation, sewer, energy infrastructure planning)	YES	YES	YES	_____

***RISK = Likelihood of an Impact X Consequence of the Impact; each factor scored from 1 to 5 and overall risk was categorized as "Low" (1-7 total score), "Medium" (8-15 total score), and "High" (16-25 total score).**

Chula Vista Climate Change Impacts & Adaptation Options

COASTAL INFRASTRUCTURE & RESOURCES

IMPACT TO SAN DIEGO REGION		VULNERABILITY			ADAPTATION OPTIONS	CRITERIA			NOTES
		Pressure on Local Systems & Services	Risk*			City Jurisdiction?	Fiscally Feasible?	Complement Current Measures?	
Sea level rise along the coast and bayfront	A	Existing public infrastructure and critical facilities along coast (municipal buildings, power plants, roads, railways, wastewater, historic landmarks, etc) at risk of flooding or inundation	HIGH Likelihood: 5 Consequence: 5 TOTAL: 25	1	Perform a detailed vulnerability assessment (identify property/infrastructure risks, risks of damage, costs of inaction) of existing coastal public and private infrastructure to sea level rise to prioritize vulnerabilities when updating policies, plans, and making public investments like protecting the coast with "hard" (bulkheads, seawalls, etc) or "soft" (revegetation, marsh creation, etc) measures	YES	YES	YES	ICLEI regional initiative can provide resources for this measure
				2	Actively collaborate with regional agencies including Port of San Diego, SANDAG, and Caltrans, and neighboring jurisdictions to ensure future development, redevelopment, or maintenance of existing public infrastructure incorporates risks from sea level rise	YES	YES	YES	There are efforts underway to work with Port of SD on additional sea level rise analysis and coastal climate adaptation planning
				3	Incorporate climate change impacts information into design, construction, operations, and maintenance of near-coast city infrastructure projects by educating City staff and sharing information on the projected impacts of climate change	YES	YES	YES	_____
				4	Perform a vulnerability assessment of historic landmarks and properties of high cultural significance along bayfront to determine whether city is able to protect, move, or reinforce them	YES	YES	YES	ICLEI regional initiative can provide resources for this measure
				5	Work with California Energy Commission to assess impact of sea level rise, temperature increase, precipitation changes, and extreme events when siting, maintaining, or renovating new energy infrastructure	YES	YES	YES	_____
	B	Existing private property along coast (residential, commercial, industrial property) at risk of flooding or inundation	HIGH Likelihood: 5 Consequence: 5 TOTAL: 25	7	Inform coastal/watershed front property owners of increased risks for flooding, and connect them where possible to existing resources, information, or programs that will help lower their exposure to sea level rise	YES	YES	YES	_____
				8	Consider new rebuilding guidelines when structures are damaged by sea level rise, coastal storms, or shoreline erosion, to lower costs to properties at risk	YES	YES	YES	_____
	C	New coastal development or redevelopment of bayfront areas at risk of flooding or inundation if sea level rise not taken into account	HIGH Likelihood: 5 Consequence: 5 TOTAL: 25	9	Develop an interdepartmental adaptation team to review existing plans, policies, and investments (ie. Bayfront Master Plan, General Plan) to ensure information about projected climate change impacts is incorporated as they are revised	YES	YES	YES	_____
				10	Leverage tools, guidance, or funding resources when available by State agencies (i.e. California Coastal Commission, Ocean Protection Council) to update Local Coastal Plan and General Plan to ensure climate change impacts are incorporated	YES	YES	YES	_____
				12	Cluster new development in areas considered to have a low vulnerability to sea-level rise	YES	YES	YES	_____
				13	Incorporate construction setbacks or restriction of land uses to reduce risks posed to new constuction and redevelopment in areas that will likely be significantly impacted by sea level rise within the life of the structure	YES	YES	YES	_____
				14	Consider building code updates to encourage new coastal structure design to be resilient to potential flood or shore erosion (i.e. raised, behind existing coastal armoring structure)	YES	YES	YES	_____
	D	Low income residents bear proportionately high burden from sea level rise when having to reinforce structures, relocate, or purchase more insurance for coastal properties	MEDIUM Likelihood: 5 Consequence: 3 TOTAL: 15	15	Partner with community organizations to perform an analysis of social equity issues related to sea level rise to assess resiliency of low-income communities to sea level rise or flooding risk, to guide relevant future policy/program development	YES	NO	YES	CCWG Comment: Reassess whether this is a vulnerability & its timeframe (i.e. are there even low income residents in inundation area?)
Increased erosion of beaches, cliffs and dunes	E	Loss of beaches, trails, scenic vistas, other coastal recreation areas, and public access to waterfront over time	HIGH Likelihood: 4 Consequence: 4 TOTAL: 16	16	Develop a mitigation bank for long-term habitat restoration from coastal armoring undertaken to protect areas from sea level rise related flooding or inundation	YES	YES	YES	_____
				18	Develop a "Purchase of Development Rights" program, where landowners can voluntarily sell development rights of their land vulnerable to sea level rise to a public agency or non-profit land trust	YES	YES	YES	_____
				19	Develop policies to protect public access to the shoreline as sea level rises (e.g. require that public access is constructed to accomodate projected sea level rise, that new public access be provided if existing access areas are permanently inundated, or require payments in lieu of providing new access)	YES	YES	YES	_____
				20	When developing environmental "mitigation" for development projects, ensure that the integrity of any coastal mitigation projects are reslient to sea level rise and flooding risks into the future in order to not lose their mitigation value over time	YES	YES	YES	_____

***RISK = Likelihood of an Impact X Consequence of the Impact; each factor scored from 1 to 5 and overall risk was categorized as "Low" (1-7 total score), "Medium" (8-15 total score), and "High" (16-25 total score).**

Chula Vista Climate Change Impacts & Adaptation Options

BUSINESS & ECONOMY

IMPACT TO SAN DIEGO REGION		VULNERABILITY			ADAPTATION OPTIONS	CRITERIA			NOTES
		Pressure on Local Systems & Services	Risk*			City Jurisdiction?	Fiscally Feasible?	Complement Current Measures?	
Multiple Impacts	A	Low awareness of climate impacts and changing trends could cause businesses and community to take more costly, reactive measures, rather than early, proactive actions or leverage positive opportunities	MEDIUM Likelihood: 3 Consequence: 5 TOTAL: 15	1	Leverage existing forums (partnerships with business associations, Chula Vista Chamber of Commerce, City website, FREBE program, etc) to raise awareness amongst businesses on changing trends, climate impacts, municipal actions, and resources available to inform business decisions	YES	YES	YES	_____
				2	Add various climate adaptation-related strategies to certification process for the Chula Vista Clean Business Program	YES	YES	YES	_____
				3	Continue to analyze information on potential impacts of climate change on government operations and the local economy, and actively share results with the public to foster an aware and supportive public for adaptation policy	YES	YES	YES	_____
				4	Include businesses in municipal climate adaptation working groups/forums and future adaptation planning to facilitate information exchange	YES	YES	YES	_____
				5	Engage workforce training programs over time, to create support services/retraining in case of job joss as a result of climate change, and promote new and relevant business opportunities	YES	YES	YES	_____
	B	Extreme weather causes potential increased risk for disruptions to transportation systems, energy systems, water supplies	MEDIUM Likelihood: 3 Consequence: 5 TOTAL: 15	7	Where appropriate, engage business in update of the 2015 County Multi-Jurisdictional Hazard Mitigation Plan, which is anticipated to address climate change impacts on existing hazards and response planning	YES	YES	YES	_____
	C	Potential for higher insurance rates through increased risk from wildfires and floods	MEDIUM Likelihood: 3 Consequence: 4 TOTAL: 12	9	Share information with business and residents on emerging insurance products to protect climate-friendly and green building investments (e.g. Fireman's Fund)	YES	YES	YES	_____
	D	Increased pressure on business supply chains due to decrease in available resoures, and potentially increasing costs due to growing scarcity (e.g. water, energy, certain local agricultural products, etc.)	MEDIUM Likelihood: 3 Consequence: 4 TOTAL: 12	13	Identify and seek opportunities to diversify local economy in response to global supply chain pressures, in order to reduce effects to the local economy from climate change impacts in other regions	YES	YES	YES	_____
	E	Certain industries may be particularly vulnerable to physical impacts of climate change, due to their business model's sensitivity to climate/weather conditions (e.g. agriculture, tourism, fishing, etc)	LOW Likelihood: 3 Consequence: 2 TOTAL: 6	14	Focus outreach & education of climate impacts to businesses in such industries (agriculture, fisheries, forestry, etc.) where feasible	YES	YES	YES	_____
				15	Generate list of consultants/resources for businesses to asses risks, manage risks, and incorporate into planning	YES	YES	YES	_____
	F	Investors may require greater knowledge of business/economic exposure to climate-related risks	LOW Likelihood: 3 Consequence: 2 TOTAL: 6	19	Work with relevant business associations and community groups to engage businesses in disclosing climate-related risks and corporate climate strategies to meet federal mandates (e.g. SEC Disclosure) and emerging investor preferences for such information	YES	YES	YES	_____
	G	Local economy and buying power of local customers/clients altered by costs from direct or indirect climate impacts	MEDIUM Likelihood: 3 Consequence: 3 TOTAL: 9	20	Actively engage in federal and state policy development, in partnership with local business, to advocate for some diversion of funds raised from cap and trade schemes, or create a local fee authority, to be available for local climate adaptation programs, policies, and plans	YES	YES	YES	_____
				21	Encourage a locally-based carbon credit/offset purchasing program to foster local climate-friendly projects and retain economic benefits from them	YES	YES	YES	_____
				22	Provide non-monetary incentives for businesses to locate in Chula Vista that produce sustainable and environmentally-friendly products or that utilitize sustainable principles in their production processes as a way to promote economic resilience to climate change	YES	YES	YES	_____
				23	Provide assistance in the creation or identification of markets for sustainable businesses or their products	YES	YES	YES	_____
Sea level rise	H	Risk of flooding or inundation of existing and planned public & private infrastructure and critical facilities along coast (commercial or industrial property, municipal buildings, power plants, roads, railways, wastewater	HIGH Likelihood: 5 Consequence: 5	24	Perform a detailed vulnerability assessment (identify property at risk, risks of damage, costs of inaction) of existing coastal public and private infrastructure to sea level rise to prioritize vulnerabilities when updating policies, plans, and making public investments. Can Partner with ICLEI's Regional Initiative	YES	YES	YES	ICLEI regional initiative can provide resources for this measure
				25	Consider building code updates to encourage new coastal structure design to be resilient to potential flood or shore erosion (i.e. raised or behind existing coastal armoring structure),	YES	YES	YES	_____

		treatment, etc.)	TOTAL: 25	26	Consider new rebuilding guidelines when structures are damaged by sea level rise, coastal storms, or shoreline erosion to lower costs to properties at risk	YES	YES	YES	
				27	*See various other prevention measures in upcoming "Coastal Resources and Infrastructure" and "Water" sections to lower physical impacts and thus costs from sea level rise*				
Warmer temperatures, especially in summer, and more varied precipitation	**I**	Greater potential health costs incurred from increasing frequency and intensity of heat waves, and higher ground level ozone	MEDIUM Likelihood: 3.5 Consequence: 4 TOTAL: 14	28	Mitigate health impacts and costs of heat waves by working with the County to ensure that all Chula Vista city departments and community groups possibly involved in implementing the County's Excessive Heat Response Plan are aware and equipped to perform their role during high heat events	YES	YES	YES	
				29	Mitigate health impacts and costs of ozone-related respiratory illness by partnering with local air quality management distrit (APCD) to enhance awareness of air quality index alerts and related outreach and education to protect residents' health	YES	YES	YES	
				30	*See other prevention measures from "Public Health & Wildfire" sections to lower susceptibility to and thus costs from heat and ozone-related illness*				
	J	Vulnerable workforce to interruptions from high heat events, especially industries such as construction, outdoor laborers, and roofing	MEDIUM Likelihood: 3.5 Consequence: 4 TOTAL: 14	31	Mitigate health impacts and costs of heat waves through outreach to businesses about California Occupational Safety and Health programs and standards for heat illness and employees working outdoors, in partnership with any relevant business, labor, or community groups	YES	YES	YES	
	K	Increasing pressure and costs to meet rising energy demands, especially in hot summers when cooling needs are greater and transmission inefficiencies are highest	HIGH Likelihood: 5 Consequence: 4 TOTAL: 20	32	Enroll all municipal facilities in demand response programs (if applicable), in part to reduce peak demand and energy costs	YES	YES	YES	
				33	Develop incentives or financing mechanisms to expand urban forests on public & private properties to reduce heat island effect and energy costs in high heat	YES	YES	YES	
				36	*See various other prevention measures from "Energy" sections to lower risks from rising energy demands, rates, and costs to economy*				
	L	Lower water supplies available for commercial, industrial, and community users, and exposure to extended and more intense droughts	HIGH Likelihood: 4 Consequence: 4 TOTAL: 16	37	Require buildings to obtain complete water efficieny retrofit on resale, to reduce water consumption and water bills over time	YES	YES	YES	
				38	Integrate water conservation concerns into the municipal project procurement process, to reduce water consumption and water bills over time	YES	YES	YES	
				40	*See various other prevention measures from "Water" section intended to lower physical and thus financial impact of drought, floods, increasing water rates*				
	M	Higher risk of incurring costs of losing public and private infrastructure due to more frequent and intense fires	MEDIUM Likelihood: 2 Consequence: 5 TOTAL: 10	41	Direct city staff to investigate whether the city's building codes, wildlife urban interface code, and zoning rules need revision due to future increases in wildfires due to climate change	YES	YES	YES	
				42	Identify high fire risk areas that would allow for the safe burial of existing power lines (coordinated with road improvement projects and upgrades in the Capital Improvement Program) to avoid interruptions due to wildfire events	YES	YES	YES	
				43	*See various other prevention measures from "Public Health & Wildfire" sections intended to lower frequency of wildfires, as well as assets exposed to high fire risk*				
	N	Higher risk of losing protected coastal, riparian or inland ecosystems, plants and animals due to rate of temperature change, increasing wildfires, changing precipitation, and sea level rise	MEDIUM Likelihood: 3 Consequence: 4 TOTAL: 12	44	Seek potential funding opportunities for fuel management to reduce fire frequency, in balance with efforts to reduce ignition sources, educate the public, and other best practices in managing the wildland urban interface	YES	YES	YES	
				45	Seek potential funding opportunities for fuel management to reduce fire frequency, in balance with efforts to reduce ignition sources, educate the public, and other best practices in managing the wildland urban interface	YES	YES	YES	

				46	*See various other prevention measures from "Ecosystems & Biodiversity" sections intended to lower physical impacts and potential costs to economy from loss of ecosystems and local natural resources*				_____

***RISK = Likelihood of an Impact X Consequence of the Impact; each factor scored from 1 to 5 and overall risk was categorized as "Low" (1-7 total score), "Medium" (8-15 total score), and "High" (16-25 total score).**